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WAR DEPARTMENT

(d) Brigades. The brigade should be the basic formation on which the division should be built up. (As outlined in Appendix "A" of the report.)  
Authority JCS Memo 12 Jan 73  
BY CCA MARS, Date 12/5/73

G-2 Report.  
(e) "Ad Hoc" formations. These should not be created, except in the case of a major emergency.  
RECEIVED 6/27/73 JAN 30 1947 I.G. Nos. 6675, 6570.

2. Divisional Reconnaissance Unit. This unit should be organized as a separate unit. As an interim measure, the motor cycle battalion should be allotted. For reasons of security, the motor cycle battalion should be organized as a separate unit.

Subject: Report of the Bartholomew Committee on Lessons of the War in Flanders.

Source: War Office, official. Major General A.E. Nye, Director of Staff Duties.

Summary: The War Office still declines to give us a copy of the report provided Bartholomew report. However, a summary of conclusions has been now furnished and is quoted below, following it is a study of the changes actually made.

4. Tactics.

THE BARTHOLOMEW COMMITTEE.

After the return from Dunkirk a committee headed by Sir William Bartholomew was formed to make a study of the lessons of the war in Flanders and to recommend changes indicated in organization, equipment, training or tactical doctrine.

The committee made its report some time ago but the War Office has consistently declined to give us a copy of the report as "it contained many unsound recommendations". However, a summary of the committee's recommendations has now been furnished and is quoted below. It is not known whether the "unsound" recommendations are included or not.

SUMMARY OF THE RECOMMENDATIONS OF THE BARTHOLOMEW COMMITTEE.

This summary is divided into two parts. Part I deals with major conclusions of the report, Part II. enumerates the minor points.

5. (a) The Corpses. Having gained a small bridgehead, push through groups through on a narrow front, with complete disregard to open flanks. Any bridgehead must, therefore, be inter-attacked immediately.

1. Higher Organization.

(a) G.H.Q. Army Headquarters, working under G.H.Q., for its are essential for executive command.

(b) Corps. The corps is NOT suitable as the basic fighting formation.

(c) Motor Divisions. As a separate organization these should be abolished. (The five motor divisions have already been converted to the standard infantry division).

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is a study of the changes necessary to be made.  
has been now furnished and is dropped from the  
reconnaissance report. However, a summary of the  
The War Office still requires to give us a copy of the  
Staff Duties. Major General V.E. Miles, Director  
of the War Office, Officer.  
Subject: Report of the Reconnaissance Committee on reasons of the  
Kriegsmarine.

MEMORANDUM

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- Brigade. The brigade group should be the basic formation on which divisions and corps should be built up. (An outline organization is given in Appendix "A" attached.)
- (e) "Ad Hoc" formations. These should not be created, except as a last resort.
2. Divisional Reconnaissance Unit. A formation capable of giving support to the division. It should be an integral unit. As an interim measure a motor cycle battalion should be allotted.
3. Headquarters. Areas required.
- These have increased in size and now have to be divided during active operations; they should be organized and equipped originally into operational and rear headquarters. Priority is given to the forward headquarters. The R.A.F. should have a strong support in the forward areas.
4. Tactics. For Contact officers proved invaluable.
- Withdrawal and defence. Mobility; carriers, scout cars
- (a) In withdrawal or hastily prepared defence the occupation of a water line is sound.
- (b) Greater use must be made of wireless for intercommunication.
- (c) When time is available, the water line should cover the divisional reserve position, whilst the forward defended localities will be based on a continuous chain of natural and artificial tank obstacles forward of Corps areas.
- (d) Simple word codes are of value instead, and should be used.
- (e) The whole length of an obstacle, especially a water line must be covered by our own fire.
9. Administration.
- (d) Slit trenches afford the best protection from enemy action including dive bombing; alternative sites must be included in all lay-outs. is being worked out by Corps.
- (e) Anti-tank guns must be sited in great depth, must be well inside infantry localities, defiladed from the front, and should engage tanks by surprise in enfilade.
14. Infantry.
- (a) The Germans, having gained a small bridgehead, push their mobile troops through on a narrow front, with complete disregard to open flanks. Any bridgehead must, therefore be counter-attacked immediately. Control and equipment should be reduced and carried in vehicles from a pool.
- (b) An obstacle over which a bridgehead has been established at one point, ceases to be a sure obstacle for its whole strength. Behind divisions should be dealt with by a specially trained organization on the lines of the use of fighting troops for this role is uneconomical.
10. Defence against Tanks.
- (a) Offensive spirit in dealing with tanks is essential and special tank hunting platoons should be organized.
- (b) Anti-tank mines must be carried with the brigade transportable.

Troops should be increased to five per squadron.

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- Artillery PART II.  
Employment of Air resources.
- (a) Field Regiments should be reorganized into three.
  - (b) Closer co-operation between the Army and R.A.F. is required.
  - (c) Medium Regiments. The 5" How. with its limited range, Air attack as "supporting fire" for both armoured and infantry formations as employed by the Germans proved of outstanding value. An air formation capable of giving close support at short notice should form an integral part of infantry formations and armoured divisions.
  - (d) For reasons of morale, until (b) above can be put into effect, the R.A.F. should carry out close support in forward areas.
12. Reconnaissance
- (a) Army co-operation aircraft cannot carry out tactical or artillery reconnaissance with their existing type of aircraft unless they have local air superiority; they might be possible with a strong fighter escort or with aircraft of the fighter type.
8. Command and Control operations.
- (a) Motor Contact officers proved invaluable.
  - (b) The letter should NOT be carried by field companies but be held by the Commanders.
  - (c) Greater use must be made of wireless for intercommunication at all times, certain measures will be necessary to counter enemy D.F. organization or folding boat equipment.
  - (d) Cipher is too slow inside and forward of Corps areas; simple word codes are of value instead, and should be adopted.
13. Signaling
- (a) Signal organization of G.H.Q. requires to be more
9. Administration
- (a) Administrative plans should be on broader lines in the form of directives, details being worked out by Corps.
  - (b) Refugees. A prearranged plan is essential and controlling forces must be in position before the main refugee movement starts.
14. Infantry
- (a) The battalion requires an anti-tank gun platoon of its
  - (b) The number of transport vehicles in a Corps is too high, the reduction should be considered by an expert committee.
  - (c) The scale of 3" mortars should be decreased, telephones
  - (d) Scales of reserves of S.A.A. petrol and equipment should be reduced and carried in vehicles from a pool of transport.
15. Carriers
- (a) Control of movement behind divisions should be dealt with by a specially trained organization on the lines of the French R.R., the use of fighting troops for this role is uneconomical.
16. A.A. Gun
- (a) A higher proportion of machine gun battalions are
17. Royal Armoured Corps
- (a) An armoured car regiment with wheeled vehicles proved invaluable.
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- Troops should be increased to five per squadron.
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11. Royal Artillery PART II.

- R.A.C. (a) Field Regiments should be reorganized into three batteries of two troops each of four guns. are required.
1. Armoured Car Regiment.
- (b) Medium Regiments. The 6" How., with its limited range, should be an integral part of the basic fighting formation. It must be 4-wheel drive. It should be replaced by wireless sets to have the power of No. 9 sets.
- (c) Anti-tank Regiments. An increase in the allotment of anti-tank regiments is required. A weapon, at least 3.5 Deisa, preferably 2 pr. gun.
- (d) A.A. Regiments. An increase in the allotment of both Heavy and Light A.A. artillery, especially in the forward areas, is required.
- (a) Require their own rear link and anchor wireless sets.

12. Royal Engineers.

- R.A. (a) The organization of the field company is satisfactory, but the equipment should be drastically reduced. The G.1098 should be divided into two parts:-
3. Field Regiment.
- (i) For mobile operations.
- (a) Armoured Car For static warfare. 1 per troop. They should be replaced by wireless sets to have the power of No. 9 sets.
- (b) A motor cycle with a pillion seat should be provided. The latter should NOT be carried by field companies but be held in reserve at an Engineer dump.

4. Bridge Company. This is too large and unwieldy. It should be divided into sections. An all-purpose bridge capable of taking a tank, is required. There should be nothing between this and Kapok or folding boat equipment. A shield is required. A tractor giving better protection against S.A.A. is required.

13. Signals

- (a) All troops should be commanded by an officer.
- (a) Signal organization of G.H.Q. requires to be more mobile. It should be increased from 5 to 6 (excluding the driver).
- (b) A tracked line-laying vehicle, with a good cross-country performance, is required, especially for liaison sections.
- (i) Cooking facilities should be on a gun basis, ideally.

14. Infantry.

5. Heavy A.A. Regiment.
- (a) The battalion requires an anti-tank gun platoon of its own.
- (a) Forty five control should be corrected in training.
- (b) 400 feet should be added to the predicted height.
- (b) The scale of 3" mortars should be increased, telephones and cable should be provided for mortar platoons.
- (d) A barrage should be maintained against the leading platoon.

15. Carriers. These proved very effective. The platoon should be increased by four carriers, one for C.O. for Command purposes.

16. A.A.L.M.G's. If possible twin mounted Brens should be introduced.

- (a) Single aircraft should NOT normally be engaged.
17. M.M.G's. A higher proportion of machine gun battalions are required to cover the wide frontages held by infantry formations.
- (c) An addition of two men for meteor is required.
- (d) Kerrison predictor is not required in forward areas.

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PART II.

R.A.C.

1. Armoured Car Regiment.
  - (a) 4-man vehicle is essential.
  - (b) Vehicles must be 4-wheel drive.
  - (c) Wireless sets to have the power of No.9 sets. d be
  - (d) Vehicles must be proof against A.P. S.A.A.
  - (e) All vehicles require an anti-tank weapon, at least .8 Beisa, preferably 2 pr. gun.

2. Divisional Cavalry Regiment. d from 2 to 8.

- (a) Require their own rear link and anchor wireless sets.
  - (b) Some wheeled vehicles required. Preferably 12 scout or armoured cars in R.H.Q.

R.A.

3. Field Regiment.

- (a) Armoured O.P.'s increased to 1 per troop. they mounting
  - (b) A motor cycle with a pillion seat should be provided for each officer. A decrease can be made in the number of cars. five vehicles.

4. Anti-tank Regiment.

- (a) A proportion of anti-tank guns should be on armoured, self-propelled mountings.
  - (b) An improved shield is required.
  - (c) A tractor giving better protection against S.A.A. is required.
  - (d) All troops should be commanded by an officer.
  - (e) One regimental transport officer should be added.
  - (f) Gun crew should be increased from 5 to 6 (excluding the driver).
  - (g) Battery Commander requires a scout car.
  - (h) Battery Captain requires a motor cycle with a pillion seat.
  - (i) Cooking facilities should be on a gun basis. usually.

5. Heavy A.A. Regiment.

- (a) Faulty fire control should be corrected in training.
  - (b) 400 feet should be added to the predicted height.
  - (c) Fire at single aircraft should be limited to initial burst of eight rounds.
  - (d) A barrage should be maintained against the leading aircraft of mass formations.
  - (e) 3" is more suitable than 3.7" for mobile operations.

6. Light A.A. Regiment.

- (a) Single aircraft should NOT normally be engaged.
  - (b) Fire should be held until the enemy is within 1,000 yards (ground range.)
  - (c) An addition of two men for meteor is required.
  - (d) Kerrison predictor is not required in forward areas.

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- R.E. M.G. battalion (of five companies), based in organized 8" How. regiment. the basic fighting formation.
7. (a) More weather proof (plastic) explosives are required.  
(b) An increase of 30 per cent of motor cycles for field companies is required.
8. Sigs. Below Corps, 3-ton lorries should be replaced by 30 cwt. lorries. No. 3 Wireless sets should be abolished. The of the campaign in France. Very from time to time.
9. Infantry Battalion.
1. Armour (a) Sniper rifles increased from 2 to 8.  
(b) 3" mortars increased from 2 to 6.  
(c) Very pistols increased to 1 per section, with a need for a generous scale of cartridges.  
(d) Each carrier to be provided with an A.T. rifle. The carrier (e) Armour of carriers requires raising by 2 or 3 inches regiment. All round. have therefore been made to raise additional armour (f) Each carrier should carry smoke grenades. (g) Carriers require an A.A. mounting. in War Office letter 20 (h) Two D.R.'s should be added to the carrier platoon.  
(i) The scarf ring should replace the motley mounting
2. The Battalion (j) Anti-tank guns should be used 1 per section, carrier and group of five vehicles. the chairmanship of General S (k) 2" mortar ammunition should be 75 per cent H.E. the lessons of the 25 per cent smoke. which could be applied usefully to our present organization and training, and to suggest
10. Transport. our organization, training and equipment which should be made to meet the needs of this country. These rec (a) 10 ton lorries are too heavy for en cas mobile road and the Army convoys.  
(b) Wireless should be provided for headquarters of troop carrying companies. had to be excluded from the Committee. that the army must still be organized A.A. Small arms fire. of the world, and that organization is to some extent the of equipment production.

The value of this must be stressed.

It is not practicable for platoon commanders to control A.A. fire; men should be trained to fire individually. are discussed briefly in the following paragraphs. The tactical lessons Headquarters. been promulgated in Army Training Memoranda.

A.C.S.M. should be provided for divisional headquarters.

There has been considerable discussion as to whether the brigade group or the should be the basic fighting formation of all arms. APPENDIX "A" warfare it is essential that forward commands be able to call immediately on the supporting arms. Therefore, in mobile warfare, where frontages are and the issue of the battle depends on the speed Brigade Signal Section. Brigade A.A. platoon. Three infantry battalions. One company M.G. battalion. One field regiment. One troop 4.5" Hows. One battery anti-tank regiment. /There

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M.G. battalion (of five companies), antages in organi-  
ing fixed 6" How. regiment, the basic fighting formation.  
These are:  
Light A.A. regiment.  
Div. recce. unit.

(a) It is difficult to determine the correct normal  
proportion of supporting arms in a brigade group.

(b) It is certain that the proportion of supporting

The reorganisation of the Army as the result of  
of the campaign in France, vary from time to time.

(c) There will still be occasions on which it will be  
to concentrate all available supporting  
arms. If a proportion is permanently attached to

### 1. Armoured Formations.

The main lesson of the campaign in Flanders was the  
need for a high proportion of armoured divisions in which motor-  
ized infantry should work in very close liaison with armoured units.  
The campaign also proved the value of the wheeled armoured  
regiment. Arrangements have therefore been made to raise addition-  
al armoured divisions, and the divisions, excluding those for the  
Middle East, are being reorganized as laid down in War Office  
letter 20/R.A.C./74 dated 5th October. of concentration or decen-  
tralization that may be desired.

### 2. The Bartholomew Committee.

A committee was set up under the chairmanship of  
General Sir William Bartholomew to report to the C.I.G.S. on the  
lessons of the operations in Flanders which could be applied use-  
fully to our present organization and training, and to suggest  
modification in our organization, training and equipment which  
should be made to meet a possible invasion of this country.  
These recommendations were then considered by the General Staff  
and the Army Council. In deciding how far the recommendations  
of the Committee should be carried into effect, the Army Council  
had to consider two potent factors which had been excluded from  
the Committee's review, namely that the army must still be organ-  
ized to fight in any part of the world, and that organization is  
to some extent tied to the programme of equipment production.

The decisions of the Army Council have now been prom-  
ulgated in War Office letter 20/Gen/5884 (S.D.I.) dated  
13th October, 1940. The salient features of the new organization  
are discussed briefly in the following paragraphs. The tactical  
lessons have already been promulgated in Army Training Memoranda.

### 3. The basic fighting formation.

There has been considerable discussion as to whether  
the brigade group or the division should be the basic fighting  
formation of all arms. In very mobile warfare it is essential  
that forward commanders should be able to call immediately on the  
supporting arms. The lowest formation which can deal with a force  
of all arms is the brigade. Therefore, in mobile warfare, where  
frontages are indeterminate, and the issue of the battle depends  
on the speed with which local successes can be exploited, the  
brigade commander should have supporting arms under his command.

There  
The German technique of dive-bombing attacks on for-  
ward troops has made it necessary to provide a higher proportion  
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ion, twin brens are to be provided in place of the single gun,  
and a heavier weapon is to be designed. The division will have  
a regiment of 48 light anti-aircraft guns, of which are permanently  
sub-allotted to each division. In addition, a protective unit,  
which will be armed with anti-aircraft guns for A.A. defence, is  
being designed for the local defence of brigade and divisional

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There are, however, serious disadvantages in organizing fixed brigade groups as the basic fighting formation. These are:-

(a) It is difficult to determine the correct normal proportion of supporting arms in a brigade group.

(b) It is certain that the proportion of supporting arms required by brigades particularly field artillery and engineers will vary from time to time.

(c) There will still be occasions on which it will be

temporary withdrawal from the brigade group is a matter of improvisation. As an example, when medium machine guns formed part of the infantry battalion, it was a matter of some difficulty to handle all machine guns on a brigade basis. On the other hand, the machine gun battalion organization allows any degree of concentration or decentralization that may be desired.

In view of the lack of flexibility of the brigade group organization, the Army Council has therefore decided to retain the division as the normal basic fighting formation of all arms.

The disadvantages of a permanent allotment of supporting arms to brigades do not apply with equal force to anti-tank and anti-aircraft artillery, and one battery of each has been permanently allotted to each infantry brigade. A regimental headquarters has, however, been allotted in each case to the division, which will render it possible to concentrate anti-tank and anti-aircraft resources when necessity arises.

## 4. Reconnaissance.

The need for a reconnaissance element in every formation and forward unit is recognised. The battalion has the carrier platoon, which will in future be combined with the motor-cycle platoon. The division will have a Reconnaissance Battalion, portions of which can be decentralized to brigades as required. The battalion will contain three companies each containing three scout platoons and one infantry platoon carried in 30-cwt trucks. The scout platoons will each contain one section of 5 armoured reconnaissance vehicles and two sections of carriers. The organization is laid down in detail in War Office letter 20/Gen/5927 (S.D.L.) dated 16th November, 1940. Anti-tank guns or self-propelled mountings will be added when they become available: meanwhile an anti-tank platoon armed with anti-tank rifles is provided in the headquarter company. Armoured fighting vehicles cannot be provided for some time to come owing to the expansion of the R.A.C. included

5. Anti-aircraft defence.

The German technique of dive-bombing attacks on forward troops has made it necessary to provide a higher proportion of weapons for dealing with this form of attack. In the battalion, twin Brens are to be provided in place of the single gun, and a heavier weapon is to be designed. The division will have a regiment of 48 light A.A. guns, 12 of which are permanently sub-allotted to each brigade. In addition, a protective unit, which will be armed with light automatics for A.A. defence, is being designed for the local protection of brigade and divisional

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headquarters.

6. Anti-tank defence.

Similar factors apply to the organization of anti-tank defence. The anti-tank guns are to be increased from 48 to 64 within the division, exclusive of any which may be allotted to the divisional reconnaissance unit. The infantry brigade anti-tank company will disappear, each brigade being allotted a battery of the anti-tank regiment. The brigade and divisional protective units will contain anti-tank rifles for the protection of headquarters.

7. Field Artillery.

It is proposed to introduce the more flexible organization of three 8-gun batteries per regiment. This reorganization, together with the addition of extra gun numbers and other personnel which have been found necessary involves an increase of 12 Officers and 222 other ranks in each regiment. In view of the considerable man-power commitment involved no change will be made in the British Army until an investigation of the man-power situation has been completed.

It is also proposed to allow armoured O.Ps. on the scale of one per troop instead of one per battery.

The range of the 6" howitzer is too short for effective counter battery work under modern conditions, but it is a valuable form of reinforcing artillery. One regiment has, therefore, been allotted to each division.

8. Engineers.

The present engineer organization is flexible since field companies are self-contained units which can be detached for indefinite periods. No alteration is proposed.

With the disappearance of the pioneer battalion from the divisional organization, other provision must be made for semi-skilled labour to assist engineer troops. It is proposed to allot A.M.P.C. companies as corps troops. The number of companies per division is now under consideration.

The distribution of bridging equipment is under consideration.

9. Signals.

Minor adjustments will be necessary to fit in with the new artillery organization.

10. Machine guns.

The inclusion of one machine gun battalion in each division is the logical outcome of the arguments which have been developed in the preceding paragraphs.

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11. Services.

The establishments of R.A.S.C., R.A.M.C., and R.A.O.C. will need amendment to fit the increased number of units to be included within the division and the increased establishments of certain fighting units. No major alterations are proposed.

12. The Independent Brigade Group.

For certain operations the division is likely to prove too large a formation, and accordingly a strictly limited number of independent brigade groups are to be formed. These will be miniature divisions. It cannot be too strongly emphasized that there is no intention of departing from the division as the normal basic formation.

Reports have been submitted under I.G. Numbers covering:-

The Division	No. 41939	2017-1089/29
The Infantry Battalion	No. 41961	2017-1089/30
The Brigade Group	No. 41960	2017-534/263
Armoured C.P. for		
Artillery	No. 41973	2281-a-281/9
Changes in Artillery		
Organization	Nos. 41939, 41499, 41642	

2017-1089/29

G. BRYAN CONRAD 2017-1125/11  
Major, Field Artillery,  
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No. 42012 1st. Ind.

Office of the Military Attache, American Embassy, London, England.  
December 27, 1940. To: A.C. of S., G-2, War Dept. Washington, D.C.

Martin F. Scanlon  
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